

# PATENT SPECIFICATION

DRAWINGS ATTACHED

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## COMPLETE SPECIFICATION

### A Telephone Handset Shoulder Support

5 I, LYLE HARTFORD VAN DYKE, a Citizen of the United States of America, of 628 E. Burnside, City of Portland, County of Multnomah, State of Oregon, United States of America, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention relates to new and useful improvements in telephone handset shoulder supports, as used for supporting a telephone handset on the user's shoulder.

15 One object of the invention is to provide an improved support for a telephone handset which can be readily converted for resting on either shoulder and use with either ear.

20 According to one aspect of the invention a telephone handset shoulder support comprises two cooperating parts, namely a shoulder rest, and a support member provided with releasable means for attachment to a telephone handset to hold the handset canted inwards towards the head of a user, the support member also having a projection extending laterally to engage the hollow of the shoulder of a user of the telephone, and including means for selectively locating the two parts in two positions of angular adjustment so that the complete support can be adapted for use selectively on either shoulder, in each case with the projection extending towards the user's neck, and the handset canted towards the user's head.

35 The invention may be performed in various ways and one specific embodiment with several modifications thereof will now be described with reference to the accompanying drawings, in which:—

40 Figure 1 is a perspective view of a support, constructed in accordance with the invention, mounted on a telephone handset;

Figure 2 is an enlarged, end elevational

view, partly in section, of the support and a portion of the handset;

Figure 3 is a side elevational view, partly in section and taken on the line 3—3 of Figure 2;

Figure 4 is a cross-sectional view, taken on the line 4—4 of Figure 3;

Figure 5 is an exploded, perspective view of a portion of the support, showing the connection between its shoulder rest and attachment member.

Figure 6 is a cross-sectional view, similar to Figure 3, showing a modified connection between the member and rest,

Figure 7 is a view, similar to Figure 6, showing another modified connection, and

Figure 8 is an exploded perspective view showing the detachable connection of the strap to one of the jaws of the socket.

In the drawing, the numeral 10 designates a support for a conventional telephone handset 11 having the usual handle 12. The support 10 includes a body or support member 13 for attachment to the handle 12 of the handset 11 and a shoulder rest 14 which is in the form of an arced or curved cradle member having legs 15 and 16 for overlying the front and back portions of the shoulder of a user. Preferably, the attachment member 13 and shoulder rest 14 are formed of plastic or other material capable of being molded. A coextensive pad 17, of soft rubber or other suitable cushioning material, overlies and is secured to the inner, curved surface of the shoulder rest between longitudinal, marginal flanges or ribs 18. For connecting the rest 14 to the attachment member 13, a flat, rectangular boss or oblong projection 19 is formed on the outer surface of said rest intermediate its ends and more closely adjacent its front leg 15. The boss 19 is of greater length than width and has

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upright end surfaces or shoulders 20 perpendicular to its outer or upper flat surface and in alignment or substantially flush with the outer surfaces of the ribs 18 (Figures 3-5) which are perpendicular to the outer, curved surface of the rest. One surface 20, together with the said outer flat surface, constitute the pair of inclined surfaces on the shoulder rest, as referred to above. The other surface 20 constitutes the third surface. The said outer flat surface also constitutes one of the main abutting surfaces referred to. An opening 21 extends transversely through the medial portion of the boss and rest for receiving fastening means comprising a screw 22 and the outer portion of the opening is enlarged in diameter to provide a cylindrical recess or socket 23 (Figure 5). A cylindrical recess or socket 24, of smaller diameter and greater depth than the recess 23, is formed in each end portion of the boss 19 medially between said recess 23 and each end surface 20. The recesses are tapered and have their axes disposed in a common plane extending longitudinally of the boss.

For coacting with the boss 19, a pair of flat surfaces or shoulders 25 and 26 are formed on a margin of the attachment or support member 13 and extend at a right angle to each other. These surfaces constitute the second pair of inclined surfaces on the support member. The longer shoulder 25 is complementary to the outer, flat surface of the boss and has a projection or protuberance 27 and elements or pins 28 complementary to and adapted to engage within the recesses 23 and 24 of the boss. These projections and recesses constitute the locating means. An axial opening 29 extends through the protuberance 27 and its shoulder for receiving the screw 22 and permitting connection thereof to a nut 30 disposed within a recess or slot 31 extending transversely of and communicating with the inner end of the opening (Figure 3). The shorter shoulder 26 extends outwardly from the inner end of the shoulder 25 for flush engagement by one of the end surfaces 20 of the boss (Figure 4), being of slightly greater height so as to project beyond said boss. The sockets 23 and 24, protuberance 27 and pins 28 coact to hold the rest 14 positively against movement relative to the member 13 when the screw 22 is in tight engagement with the nut 30. Since the recesses, protuberance and pins are spaced equally from one another and the ends of the boss 19 and shoulder 25 and have their axes aligned, the rest is reversible relative to the attachment member to permit positioning of the support upon either shoulder for use with either ear. Upon loosening of the screw, the rest and member may be separated sufficiently to withdraw the pins 28 from the recesses 24 whereby said rest may be turned 180° to dispose the outer

end surface of the boss adjacent the shoulder 26.

Due to the flush engagement between the shoulder 26 and one of the end surfaces 20 of the boss 19, only one of the pins 28 is required to hold the member 13 and rest 14 against relative movement and one of said pins may be eliminated as shown in the modification of Figure 7. Of course, both recesses 24 are necessary to permit reversal of the rest. As shown by the numerals 23<sup>1</sup> and 24<sup>1</sup> in the modification of Figure 6, the recesses may be formed in the attachment member 13<sup>1</sup> for receiving the protuberance 27<sup>1</sup> and pins 28<sup>1</sup> which project from the outer curved surface of the shoulder rest 14<sup>1</sup>. In this modification the boss 19 is omitted and the coacting shoulder 25<sup>1</sup> of the member 13<sup>1</sup> is increased in thickness to provide sufficient material for the formation of the recesses. As shown by the numeral 26<sup>1</sup>, the shorter shoulder is reduced in height and is adapted to bear against either one of the longitudinal margins and ribs 13<sup>1</sup> of the rest which function in the same manner as the end surfaces 20 of the omitted boss 19. With the exception of the foregoing, the member 13<sup>1</sup> and rest 14<sup>1</sup> may be identical to the member 13 and rest 14.

For adjustable, clamping engagement with the handle 12 of the telephone handset 11, the support or attachment member includes an open-ended socket or saddle 32 formed by a pair of coacting, spaced elements or jaws 33 and 34 which extend at an acute angle to the shoulder 25 (Figure 3). The jaws 33 and 34 are substantially parallel and have their outer ends terminating in inwardly-directed, opposed projections or lips 35 and 36. An arcuate bottom of curved bight portion 37 is provided at the inner end of the saddle 32 between the jaws and is connected to each jaw by an arch portion 38 which has reverse curves and a transverse shoulder 39 adjacent the bight portion. The handset handle 12 is adapted to be confined in the saddle in engagement with the projections 35 and 36 and bight portion 37. The configuration of the saddle is adapted to accommodate handles of different contours. For example, as shown by the broken lines 40, the handle may be substantially rectangular in cross-section and be engaged by the arch portions 38 and parallel portions of the jaws as well as the projections.

The jaw 33 forms a portion of the margin of the member 13 and is relatively thin so as to be more flexible or resilient than the jaw 34 which is disposed within said member and extends inwardly from its margin (Figure 3). A substantially triangular arm or extension 41 of the member is disposed between the shoulder 26 and the jaw 34 and has a margin 42 extending at an obtuse angle to said jaw from its projection 36. The arm 130

41 projects beyond the shoulder 26, terminating in an apex 43 which is connected to said shoulder by a stepped margin 44 having portions extending parallel to the shoulder 26.

5 As shown most clearly in Figures 1 and 2, the arm projects transversely of the legs 15 and 16 of the rest 14 and is adapted to coact therewith to provide a three-point support.

10 Due to its projection, the arm engages the hollow of a user's shoulder when the rest legs are engaged with the front and back of the shoulder.

For coacting with the saddle 32 to confine the handle of a telephone handset therein, a band or strap 45, of spring steel or other flexible material, overlies the outer ends of the jaws 33 and 34 so as to close the outer end of said saddle. As shown most clearly in Figure 8, an opening 46 is formed in one end of a strap 45 for engagement with a hook element or projection 47 on the outer surface of the jaw 33. The strap extends beyond the other jaw 34 through a longitudinal groove or recess 48 in the margin 42 of the arm 41 and has its opposite end 49 apertured and bent inwardly upon itself at a right angle. An elongated opening or slot 50 is formed in the arm in parallel relation to the shoulder 26 and has its inner end communicating with the inner end of the groove 48 for receiving the strap 45 with its apertured end 49 extending transversely of the slot. The strap end is movably confined by an underlying nut 51 upon a screw 52 which projects inwardly through the arm margin 44 into the slot 50 to permit the strap to be loosened and tightened. The inner end of the screw 52 bears against the bottom of the slot whereby the strap end 49 and nut 51 are moved longitudinally of said slot upon rotation of said screw. Since the jaw 33 is flexible, it is pulled inwardly toward the jaw 34 when the strap 45 is tightened by outward movement of the nut 51. As shown by the numeral 53, the attachment member is of recessed construction to lighten its weight and reduce the amount of required material.

In order to mount the support 10 upon a telephone handset, the screw 52 is rotated to move the nut 51 inwardly of the slot 50 and loosen the strap 45 sufficiently to permit disengagement of its opening 46 from the hook 47. The handle 12 of the handset 11 is positioned within the saddle 32 of the attachment member 13 and the strap is re-engaged with the hook in overlying relation to said handle. Upon rotation of the screw, the strap is tightened to clamp the handle in the saddle and urge the flexible jaw 33 toward the jaw 34. The shoulder rest 14 is disposed with its front leg 15 extending toward the transmitter end of the handset, the illustrated position being for use with the right ear and shoulder. For converting the

support for use with the left ear and shoulder, the member and rest are reversed so as to extend in the opposite direction relative to the handset. It is only necessary to loosen the strap 45 in order to permit reversing or inverting of the attachment member and one end of said strap remains fastened to said member during the manipulation of the support. Since it is designed to fit the shoulder, the rest 14 must be reversed when the support is converted for use with the left ear and shoulder. As explained, the screw 22 is loosened to permit sufficient separation of the boss 19 from the shoulder 25 for the withdrawal of the pins 28 from the recesses 24. The rest is turned 180° relative to the member to position the outer end surface 20 of the boss contiguous the shoulder 26 for engagement therewith. Upon tightening of the screw, the support is ready for use. It is noted that the configuration of the saddle 32 and its flexible jaw 33 permits adjustment of the support longitudinally of the handset so that said handset may be comfortably positioned in proper relation to the ear and mouth of the user.

#### WHAT I CLAIM IS:—

1. A telephone handset shoulder support, comprising two cooperating parts, namely a shoulder rest, and a support member provided with releasable means for attachment to a telephone handset to hold the handset canted inwards towards the head of a user, the support member also having a projection extending laterally to engage the hollow of the shoulder of a user of the telephone, and including means for selectively locating the two parts in two positions of angular adjustment so that the complete support can be adapted for use selectively on either shoulder, in each case with the projection extending towards the user's neck, and the handset canted towards the user's head.

2. A telephone handset shoulder support as claimed in Claim 1 in which the shoulder rest is formed with a pair of surfaces inclined to one another, and the support member has a pair of correspondingly inclined surfaces to cooperate with the surfaces on the shoulder rest, one of the two main cooperating parts being provided with a third surface complementary to and in opposed relation to one of the pair of inclined surfaces on the said part, the third surface being similarly inclined relative to the adjacent surface of the pair of inclined surfaces on the same part, as the said adjacent surfaces is inclined to the other of the said pair of inclined surfaces, and this third surface being engaged by one of the surfaces on the other part when the parts are moved into one of two relative angular positions, and including adjustable fastening means extending between and connected to the shoulder rest and the support

member to clamp the two parts selectively in either of the two positions.

5 3. A telephone support as claimed in Claim 2 in which one of the two inclined surfaces on one of the parts is formed on the flank of a shoulder projecting from this part, and the other part (which has the three surfaces) is formed with two alternative surfaces for engagement with this flank, and a main abutting surface which engages a corresponding main abutting surface on the first part in both of the two positions.

10 4. A telephone support as claimed in any of the preceding claims, in which, when the adjusting means is released or loosened, the two parts can rotate relative to one another, about an axis passing through each of the parts.

15 5. A telephone support as claimed in Claim 4, in which the axis of rotation passes through one of the pair of inclined surfaces on each part.

20 6. A telephone support as claimed in any of the preceding claims, in which the fastening means extends through one of the pair of inclined surfaces on each part.

25 7. A telephone support as claimed in Claim 5, including locating means extending approximately parallel to the fastening means, to locate the two surfaces through which the fastening means passes against lateral displacement, and thereby hold the second surfaces of each pair in engagement.

8. A telephone support as claimed in Claim 7, in which the locating means comprises a projection on one part and a cooperating recess on the other part to receive the projection and engage the flanks thereof.

35 9. A telephone support as claimed in Claim 8, in which a second cooperating recess is formed on the other part laterally spaced from the first recess to receive the projection when the parts are moved from one relative position to the other.

40 10. A telephone support as claimed in any of the preceding claims, in which one surface of the pair of inclined surfaces on one part engages with and abuts against the same surface of the pair of surfaces on the other part, in both positions of the parts, and these two engaging surfaces are of oblong or elongated profile.

45 11. A telephone shoulder support including a reversible connection between a shoulder rest and a support member substantially as described with reference to the accompanying drawings.

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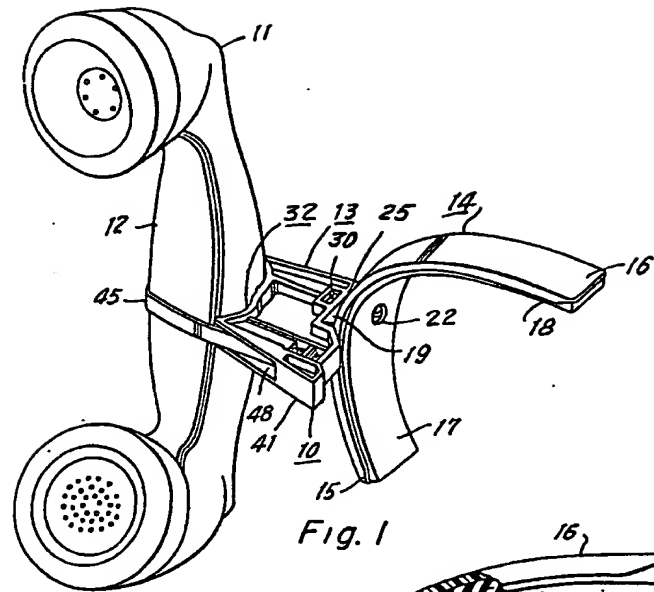


Fig. 1

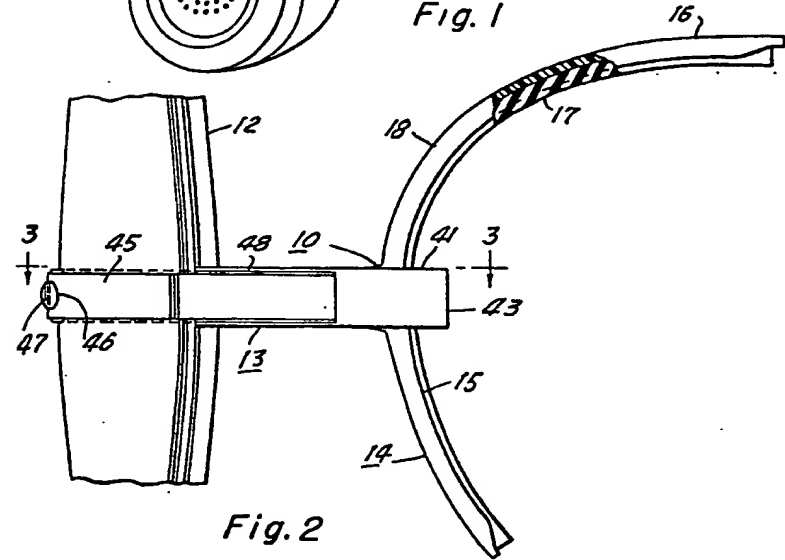


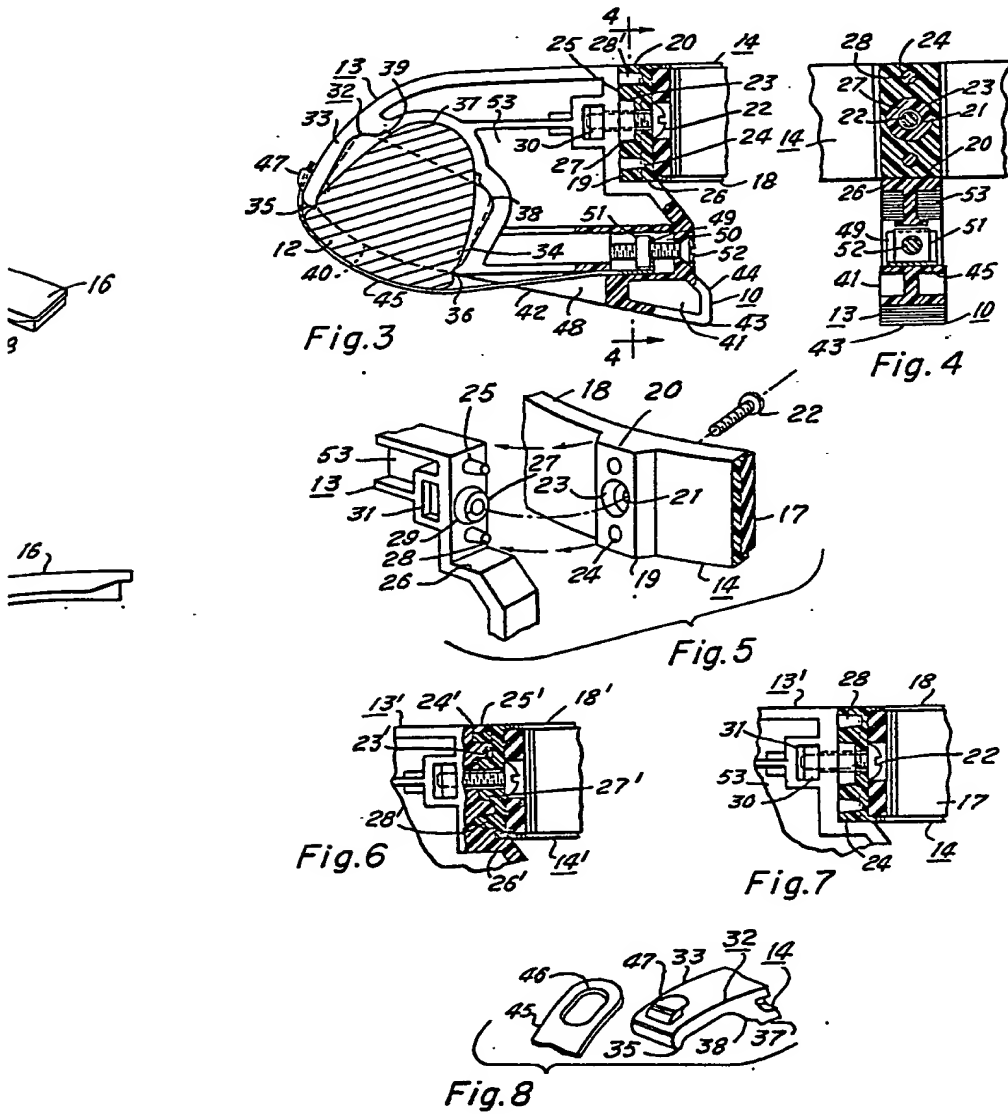
Fig. 2

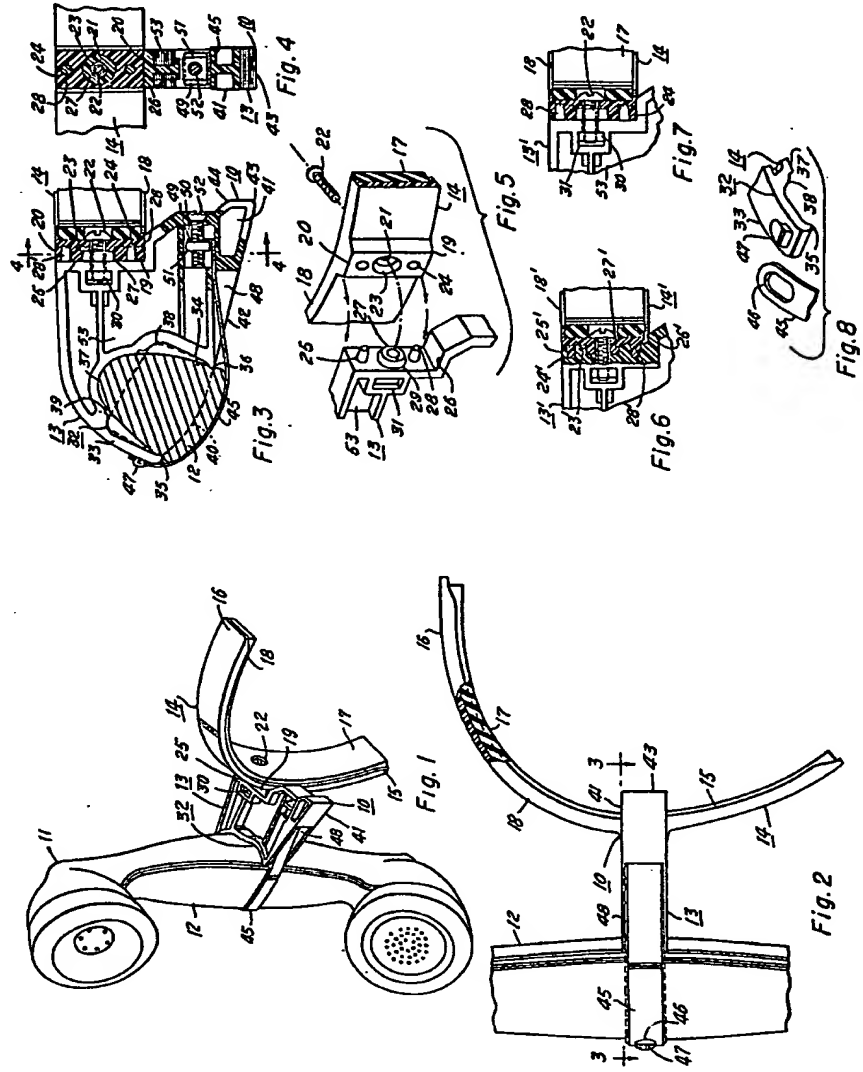
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COMPLETE SPECIFICATION

2 SHEETS

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